

Roberts, Bradley

From: David_Anderson@oxy.com
Sent: Tuesday, June 21, 2016 10:24 AM
To: Roberts, Bradley; Charles.Janson@ghd.com
Subject: RE: Occidental CMS

Brad,

Thanks for the input. As part of the CMS we are evaluating proven DNAPL remediation technologies and we will make sure to consider those presented at the conference. A primary criteria for any DNAPL technology will be to assess its potential to reduce the source of constituents to the groundwater to a point where the dissolved plumes will significantly decrease and the need for long-term hydraulic containment is minimized or eliminated. DNAPL remediation approaches that can achieve this goal will be strongly considered while those that cannot will be given less consideration.

I will send out an invitation for a monthly call between the three of us. Can you remind me which days work the best for you?

Thanks, Dave

(713) 840-3090 office

Ex. 6 PII

From: Roberts, Bradley [mailto:roberts.bradley@epa.gov]
Sent: Wednesday, June 15, 2016 8:00 AM
To: Anderson, David W <David_Anderson@oxy.com>; Charles.Janson@ghd.com
Subject: Occidental CMS

David & Charles, I wanted to get back with you about how things are going in the CMS and some thoughts I had for addressing the source area(s) at the Wichita site. Below is a link to an article I ran across at the Battelle conference; there is also a link to an EPA website on NAPL remediation that might be helpful. I was telling my colleagues about how many presentations there were at the Battelle Conference on Thermal Remediation and how the conference organizers went to great lengths to study what technologies the regulated community expressed interest in, and were increasingly being employed before putting together their program. You can imagine DNAPL was a big focus area and besides thermal, surfactants, oxidants and bioremediation were used for remediation, including at depths at or below those at the Wichita site. Below is also a link to the Battelle Conference website where you can access the final program to see what was presented. The proceedings are not available yet, but should be with the next 30 – 60 days. I know you were looking into DNAPL recovery, and of course the more that can be recovered directly the better, but in the work plan you didn't go into detail about how you intended to follow that up with source area treatment. Juan did say you'd be considering a list of options and I did tell the CIG that I was looking forward to source area treatment, and that Occidental would be presenting the results of their study into their options in the CMS, so I'm just emphasizing that I'm looking forward to seeing what you've found out. Of course the work on improving the groundwater recovery system has been well founded and I anticipate it will be providing benefits for many years to come. As we mentioned in the meeting, I'd like to talk more with you on future conference calls, so if there's a time that works well, please send me a meeting invitation by email. Thanks!

<http://onlinelibrary.wiley.com/doi/10.1111/gwmmr.12149/abstract>

https://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/display.highlight/abstract/5916

<http://www.battelle.org/media/conferences/chlorcon>

Brad Roberts, Environmental Scientist

AWMD/WRAP/RCAP

US EPA Region 7

11201 Renner Blvd.

Lenexa, KS 66219

Phone: 913-551-7279

Fax: 913-551-9279

Email: roberts.bradley@epa.gov